

REMARKS

Claims 1, 13, 16 and 18 have been amended. Claims 1-8 and 13-18 remain for further consideration. No new matter has been added.

The objections and rejections shall be taken up in the order presented in the Official Action.

2-3. Claims 1-8 and 16-18 currently stand rejected under 35. U.S.C. §112, second paragraph for allegedly failing to distinctly claim and particularly recite the subject matter deemed to be the present invention.

Claims 1, 13, 16 and 18 have been amended.

4-5. Claims 1-4 and 6-8 currently stand rejected for allegedly being anticipated by the subject matter disclosed in U.S. Patent 6,015,993 to Voldman (hereinafter "Voldman").

Claim 1 has been amended to now recite "*..., and having an insulator dimension that is equal to the distance between said first and second regions;*". (emphasis added, cl. 1). A fair and proper reading of Voldman reveals that this reference neither discloses that the distance is equal. Accordingly, it is respectfully submitted that Voldman is incapable of anticipating the subject matter recited in claim 1.

6. Claims 1-3, 6-8 and 13-15 currently stand rejected for allegedly being anticipated by the subject matter disclosed in U.S. Patent 6,344,385 to Jun et al (hereinafter "Jun").

As amended claim 1 recites an electrostatic discharge protective device that includes:

"said second region being doped with a doped second conduction type, wherein said electrostatic discharge protective structure is located between the first and second potential busses and drains off an overvoltage pulse to one of the first and second potential busses, wherein said laterally formed electrostatic discharge diode includes a gate electrode located between said first region and said second region, said first region being separated from said second region by a distance that is equal to a width dimension of the gate electrode." (emphasis added, cl. 1).

The Official Action contends that "*... the laterally formed electrostatic discharge diode includes a gate electrode 35 located between the first region 13 and the second region 36, the first region being separate from the second region by a distance that corresponds to a dimension of the gate (figure 3a).*" (Official Action, pg. 6, lines 7-10). Claim 1 has been amended to now recite that the distance between the first and second regions is equal to a width dimension of the gate electrode. There is no teaching in Jun that the width of the dummy polysilicon layer 35 is equal to the distance between the first region 13 and the second region 36. In fact, step 75 illustrated in FIG. 7 of Jun discloses "*[a]djusting the reverse-biased diode voltage to a predetermined level by changing the length of the channel under the control gate*". Significantly, although step 75 of FIG. 7 in Jun states that the channel length can be changed, it never states that both the channel length AND the control gate are changed. Accordingly, it is respectfully submitted that Jun clearly does not disclose that "*said first region being separated from said second region by a distance that is equal to a width dimension of the gate electrode*" as recited in claim 1. As a result, Jun is incapable of anticipating the subject matter recited in claim 1.

Claim 13 recites an integrated circuit with electrostatic discharge protection, comprising, inter alia, "*(iii) a gate electrode having a width W and located between said first and second regions*

such that said first and second regions are separated by the width W.” (cl. 13). As set forth in the preceding paragraph regarding claim 1, Jun discloses that the channel length L separates the first region 13 and the second region 36. However, significantly, Jun states the channel length L can be changed (see Jun FIG. 7, step 75), but he says the length of the channel is changed under the control gate without ever stating or indicating that the length of the control must also be changed accordingly. Therefore, it is respectfully submitted that Jun is incapable of anticipating the subject matter of the present invention.

As amended claim 16 recites an integrated circuit with electrostatic discharge protection, including *inter alia*:

“(v) an insulator located between said first and second electrodes, and having an insulator dimension that is equal to the distance between said first and second regions; and

“(vi) a gate electrode in communication with and contiguous with said insulator and having a width equal to the width separating the first doped region and the second doped region.” (cl. 16)

As set forth above, Jun neither discloses (nor suggests) such a relationship between the gate electrode and the distance between the first and second regions. Accordingly, it is respectfully submitted that Jun is incapable of anticipating the subject matter recited in claim 16.

7-8. Claim 5 currently stands rejected for allegedly being obvious in view of the combined subject matter disclosed in Voldman and U.S. Patent 6,060,752 to Williams (hereinafter “Williams”).

Claim 5 is a dependent claim that depends indirectly from independent claim 1. It is respectfully submitted that this rejection is now moot since claim 1 is patentable for at least the reasons set forth above.

9. Claims 16-18 currently stand rejected for allegedly being obvious in view of the combined subject matter disclosed in Jun and Voldman.

As amended claim 16 recites an integrated circuit with electrostatic discharge protection, including inter alia:

“(v) an insulator located between said first and second electrodes, and having an insulator dimension that is equal to the distance between said first and second regions; and

(vi) a gate electrode in communication with and contiguous with said insulator and having a width equal to the width separating the first doped region and the second doped region.” (cl. 16).

The Official Action contends “*Jun et al. do not teach the insulator (gate oxide) having an insulator dimension that corresponds to the distance between the first and second regions. It is noted that the gate 35 is the same length as the distance between the first and second regions.*” (Official Action, pg. 10, lines 14-16). It is respectfully submitted that the preceding sentence is based upon an overly broad and incorrect reading of Jun. Specifically, there is no teaching in Jun that the width of the dummy polysilicon layer 35 is equal to the distance between the first region 13 and the second region 36. In fact, step 75 illustrated in FIG. 7 of Jun discloses “[a]djusting the reverse-biased diode voltage to a predetermined level by changing the length of the channel under the control gate”. Significantly, although step 75 of FIG. 7 in Jun states that the channel length can be changed, it never states that both the channel length AND the control gate are changed. Accordingly, it is respectfully submitted that Jun clearly does not disclose that “*said first region being separated from said second region by a distance that is equal to a width dimension of the gate electrode*” (emphasis added, cl. 1). As a result, even if Jun and Vodman were properly combinable, the resultant combination still fails to disclose that the first and second regions are separated by a distance that is equal to a width dimension of the gate electrode.

For all the foregoing reasons, reconsideration and allowance of claims 1-8 and 13-18 is respectfully requested.

If a telephone interview could assist in the prosecution of this application, please call the undersigned attorney.

Respectfully submitted,

Patrick O'Shea

Patrick J. O'Shea
Registration No. 35,305
O'Shea, Getz & Kosakowski, P.C.
1500 Main Street, Suite 912
Springfield, Massachusetts 01115
Telephone: (413) 731-3100 x102